

PTO/SB/80 (04-05)

Approved for use through 11/30/2005. OMB 0561-01K36  
U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO**

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

☒ Practitioners associated with the Customer Number:

23448

AND

☒ Practitioner(s) named below:

Name	Registration Number
Julio Garceran	37,138
Robert Pyles	57,495

as my/our attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent application assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please recognize or change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

☒ The address associated with Customer Number:

23448

OR

☐ Firm or  
Individual Name

Address

City

State

Zip

Country

Telephone

Email

Assignee Name and Address:

Cree, Inc.  
4500 Silicon Drive  
Durham, NC 27703

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/98 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73 (b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

**SIGNATURE of Assignee of Record**

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	10/12/05
Name	Julio Garceran	Telephone	(919) 313-5300
Title and Company	Associate General Counsel for Intellectual Property, Cree, Inc.		

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☐ Total of \_\_\_\_\_ forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9196 and select option 2.

PTO/SB/98 (09-04)

Approved for use through 7/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**STATEMENT UNDER 37 CFR 3.73(b)**Applicant/Patent Owner: Xu, et al.Application No./Patent No.: 10/712,351 Filed/Issued Date: November 13, 2003Entitled: LARGE AREA, UNIFORMLY LOW DISLOCATION DENSITY GAN SUBSTRATE AND PROCESS FOR MAKING THE SAMECree, Inc. \_\_\_\_\_, a corporation  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title, and interest.  
The extent (by percentage) of its ownership interest is \_\_\_\_\_ %

in the patent application/patent identified above by virtue of either:

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel/Frame \_\_\_\_\_, or for which a copy thereof is attached.

OR

- B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: Advanced Technology Materials, Inc. To: Cree, Inc.  
The document was recorded in the United States Patent and Trademark Office at Reel/Frame \_\_\_\_\_, or for which a copy thereof is attached.

2. From: Xueping Xu and Robert P. Vaudo To: Advanced Technology Materials, Inc.  
The document was recorded in the United States Patent and Trademark Office at Reel/Frame \_\_\_\_\_, or for which a copy thereof is attached.

3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel/Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

☒ Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Vincent K. Gustafson  
Signature

January 27, 2006  
Date

Vincent K. Gustafson  
Printed or Typed Name

(919) 419-9350  
Telephone Number

Attorney for Applicants  
Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

## PATENT ASSIGNMENT

This PATENT ASSIGNMENT is made as of March 31, 2004, from Advanced Technology Materials, Inc., a Delaware corporation having an address at 7 Commerce Drive, Danbury, CT 06810 (hereinafter referred to as "Assignor"), to Cree, Inc., a corporation organized under the laws of the State of North Carolina, having a place of business at 4600 Silicon Drive, Durham, NC 27703 (hereinafter referred to as "Assignee").

WHEREAS, Assignor is the owner of the patents and patent applications identified on Schedule A attached hereto (hereinafter collectively, the "Patents"); and

WHEREAS, Assignee is desirous of acquiring the Patents; and

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignor does hereby sell, transfer, convey, grant and assign unto Assignee, Assignor's entire right, title and interest in and to the Patents and the inventions claimed therein, in the United States and all jurisdictions outside the United States, including the right to apply for letters patent in any and all such jurisdictions based on said Patents, and including all divisional, renewal, substitute, continuation, continuation-in-part, reexamination, reissue, extension and convention applications or patents based in whole or in part upon said Patents, and any and all letters patent that may issue thereon, in any and all such jurisdictions, to the full end of the term or terms for which said letters patent may be issued, and every priority right that is or may be predicated upon or arise from the foregoing, the same to be held and enjoyed by Assignee for its own use and benefit and for the use and benefit of its successors and assigns, to be used as fully and entirely as said rights would have been held and enjoyed by Assignor if this assignment had not been made.

Assignor hereby authorizes the Commissioner of Patents and Trademarks of the United States and other empowered officials of the United States Patent and Trademark Office and/or the appropriate empowered officials in relevant jurisdictions outside the United States to record the transfer of the Patents to Assignee as assignee of Assignor's entire right, title and interest therein, and to issue to Assignee all letters patent and other items referred to above which may issue with respect to the Patents, in accordance with this Patent Assignment.

[continued on next page]

IN WITNESS WHEREOF, Assignor has caused this Patent Assignment to be executed by its proper officer thereunto duly authorized, as of the date first above written.

ASSIGNOR:

Advanced Technology Materials, Inc.

By: 

Name: Daniel P. Sharkey

Title: Vice President, Treasurer and Chief Financial Officer

STATE OF

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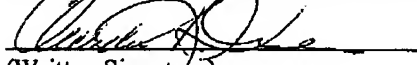
} ss:

COUNTY OF

}

Before me, the undersigned, a Notary Public of the State of Connecticut, personally appeared Daniel P. Sharkey, having been sworn by me according to law did depose and say he was the Vice President, Treasurer and Chief Financial Officer of Advanced Technology Materials, Inc., (the "Assignor") and did acknowledge the execution of the foregoing Patent Assignment on behalf of said Assignor.

WITNESS my hand and notarial seal this the 23<sup>rd</sup> day of March, 2004.

  
(Written Signature)

Claudia K. Dene  
(Printed Signature)

**CLAUDIA K. DENE**  
**NOTARY PUBLIC**  
My Commission Expires Dec. 31, 2005

ASSIGNEE:

Cree, Inc.

By: 

Name: John W. Palmour

Title: Executive Vice President

Patent Assignment  
**CONFIDENTIAL**

SCHEDULE A

## PATENTS AND PATENT APPLICATIONS

10/712,351 – Large Area, Uniformly Low Dislocation Density GaN Substrate and Process for  
Making the Same

Filed 11/13/2003

Docket No.: 685

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**ASSIGNMENT**

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We, **XUEPING XU** and **ROBERT P. VAUDO**, have made an invention the specification of which is described in U.S. Patent Application filed herewith in the U.S. Patent and Trademark Office, entitled:

**"LARGE AREA, UNIFORMLY LOW DISLOCATION DENSITY GaN SUBSTRATE AND  
PROCESS FOR MAKING THE SAME"**

We hereby assign to Advanced Technology Materials, Inc., 7 Commerce Drive, Danbury, CT 06810, all of our ownership and rights in:

- (i) the invention and U.S. Patent Application;
- (ii) continuing, divisional and continuation-in-part applications based on and claiming priority of said U.S. Patent Application;
- (iii) U.S. Patents on the invention; and
- (iv) corresponding foreign patent applications and patents.

We are making this assignment based on our employment relationship with Advanced Technology Materials, Inc.

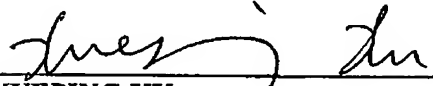
We request the Commissioner for Patents of the United States and the appropriate officers of all foreign countries to issue patents on the invention to Advanced Technology Materials, Inc. as owner of the invention and aforementioned patent rights.

We agree to execute any other legal documents that may be required to effectuate this Assignment.


We agree that we will promptly communicate to Advanced Technology Materials, Inc., all facts that come to our attention affecting the invention or patent rights.

We agree that we will testify in any interference or litigation involving the invention or patent rights.

We declare that we have not done anything in conflict with this Assignment.

  
\_\_\_\_\_  
**XUEPING XU**

11/10/03  
**DATE**

  
\_\_\_\_\_  
**ROBERT P. VAUDO**

11/10/03  
**DATE**